

Novel technologies can successfully activate positive behaviors of stakeholders involved in vaccine purchasing and usage

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Abstract

The vaccine segment is anticipated to be one of the fastest growing one of the healthcare industry and several leading firms have stepped up vaccine investments in recent years. Unlike therapeutic agents, vaccines are administered to healthy individuals only once or very infrequently during a life time. Vaccines generate well-documented positive externalities, yet their poor awareness and acceptability among vaccine endusers may contribute to resurgence of transmissible diseases and consequently trigger governmental interventions such as mandating vaccination. In addition to technical and clinical development per the highest quality standards, bringing new vaccines to market requires carefully orchestrated programs targeting the multiple types of stakeholders along the entire value chain and addressing their respective purchasing behavioral drivers. Against a backdrop of anti-vaccination buzz and vaccine fatigue, successful global launch and sustainable usage of a vaccine requires the development of a multi-pronged strategy addressing all aspects in relation to acceptability (e.g. the motivation to immunize despite the quasi-disappearance of the disease), accessibility (e.g. supply chain services), availability (e.g. mechanisms ensuring reliability of supply) and affordability (e.g. tiered pricing policy taking country differences in per capita income into account). Leveraging novel technological advances can positively influence the ability to activate these levers successfully. A vaccine is a biological preparation that provides active acquired immunity to a particular infectious disease. A vaccine typically contains an agent that resembles a disease-causing microorganism and is often made from weakened or killed forms of the microbe, its toxins, or one of its surface proteins. The agent stimulates the body's immune system to recognize the agent as a threat, destroy it, and to further recognize and destroy any of the microorganisms associated with that agent that it may encounter in the future. Vaccines can be prophylactic (to prevent or ameliorate the effects of a future infection by a natural or "wild" pathogen), or therapeutic (to fight a disease that has already occurred, such as cancer). The administration of vaccines is called vaccination. Vaccination is the most effective method of preventing infectious diseases; widespread immunity due to vaccination is largely responsible for the worldwide eradication of smallpox and the restriction of diseases such as polio, measles, and tetanus from much of the world. The effectiveness of vaccination has been widely studied and verified; for example, vaccines that have proven effective include the influenza vaccine, the HPV vaccine, and the chicken pox vaccine. The World Health Organization

(WHO) reports that licensed vaccines are currently available for twenty-five different preventable infections. The terms vaccine and vaccination are derived from Variolae vaccinae (smallpox of the cow), the term devised by Edward Jenner (who both developed the concept of vaccines and created the first vaccine) to denote cowpox. He used the phrase in 1798 for the long title of his Inquiry into the Variolae vaccinae Known as the Cow Pox, in which he described the protective effect of cowpox against smallpox. In 1881, to honor Jenner, Louis Pasteur proposed that the terms should be extended to cover the new protective inoculations then being developed. National Vaccine Plan—ensure a stable supply of recommended vaccines and achieve better use of existing vaccines to prevent disease, disability, and death in the United States—covers an extraordinarily broad set of issues. Objectives include topics related to every point along the journey from the manufacturer's production facility to the prospective recipient of the vaccine: supply; purchase, financing, and reimbursement for vaccines; vaccine management and administration; availability of and access to services; compensation for vaccine injuries; and data and information technology needs (from provider-level information technology to disease surveillance, immunization coverage, and safety surveillance capabilities). Also, vaccine supply and use issues are intertwined with safety illustrates a characteristic of the entire plan: the absence of an explicit vision statement and an extremely broad range of objectives and strategies without explanation of why certain items were included in the plan and what remained on the "cutting room floor," which items represent activities that are budgeted agency strategic priorities and expected to take place regardless of the National Vaccine Plan, and which items represent novel contributions of the plan that are not explicitly part of other existing (agency) plans. When formulating its recommendations on priority actions in Goal 4, the committee considered the implications of current efforts to reorganize the U.S. health care delivery system to support payment systems and ensure delivery of vaccines and to make concrete advances in the use of health information technology (HIT) to improve health care performance and effectiveness. Although the fate of health care reform is uncertain at the time of this writing, considerable progress has been made with regard to HIT by building on the foundation set in 2004 by the President's Executive Order 13335, establishing the Office of the National Coordinator for Health Information Technology (ONCHIT) in the Department of Health and Human Services (HHS), whose role is to lead the implementation of a nationwide HIT infrastructure that is interoperable and

safeguards privacy (GAO, 2009). Changes in the ways health information is recorded, stored, and used can have enormous implications for the delivery of immunization services. Vaccination is a cost-effective, high-value component of preventive health care and is a good indicator of how well a health care delivery system functions. Under ideal circumstances, a health information system would indicate a patient's immunization status, remind a provider of needed vaccines for a given patient, record and facilitate the reporting of potential adverse events following immunization, help a provider obtain reimbursement for delivery of immunization services, allow public health officials and researchers to measure vaccine coverage, monitor rates of vaccine-preventable diseases, and facilitate studies of the relationship between vaccines and suspected adverse events. In reality, neither the delivery of health care nor the relevant information technology systems are constituted in ways that optimize the delivery of immunization among other preventive services.

Biography:

Pierre A Morgon is the CEO of MRGN Advisors and Regional Partner for Switzerland at Merieux Developpement. He is also Chairman of the Board of Virometix, as well as Non-Executive Director to the Boards of Theradiag, of Eurocine Vaccines and of Vaccitech. He has over 30 years of experience in the global Life Science industry, especially with vaccines and immunotherapy, at the HELM of international operations, in C-level positions at global level and as CEO of start-ups. He is a Lecturer in several MBA programs in world-class business schools and in Life Science conferences, as well as to the MassChallenge biotechnology incubator in Switzerland. He holds a Doctorate of Pharmacy, Master of Business Law and an MBA. He is also an Alumnus of INSEAD and IMD.

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